ABSTRACT OF THE DISCLOSURE

Scope processing (for extracting one or more instances from an instance tree which has been stored in a database) is executed by use of a scope descriptor object which moves in an area of the instance tree that is designated by a starting position and a scope condition. The scope descriptor object starts moving in the instance tree from the starting position. The scope descriptor object generally goes down in the instance tree to an instance below the current instance if possible. When the downward movement is impossible or when the scope descriptor object went up in the instance tree, the scope descriptor object goes sideways to an instance next to the current instance if possible. When the sideways movement is impossible, the scope descriptor object goes up to an instance above the current instance if possible. The scope descriptor object stops the movement when is could not go down, when it could not go sideways and went up, and when it returned to the starting position. The scope descriptor object which stopped the movement extracts an instance of the current position if the current position is within the designated area. The scope descriptor object does not have to move throughout the instance tree, and thus the scope processing is completed in a short time.